



PATENT

Case Docket No. TOPTICS.018A  
Date: September 1, 2004

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Gene H. Haertling  
Appl. No. : 09/891,689  
Filed : June 26, 2001  
For : DEACTIVATED ELECTRO-  
OPTIC MATERIAL AND  
METHOD OF FORMING THE  
SAME  
Examiner : Evelyn A. Lester  
Group Art Unit : 2873

I hereby certify that this correspondence and  
all marked attachments are being deposited  
with the United States Postal Service as first  
class mail in an envelope addressed to:  
Commissioner for Patents, P.O. Box 1450,  
Alexandria, VA 22313-1450, on

September 1, 2004

(Date)

Mark J. Gallagher, Reg. No. 43,622

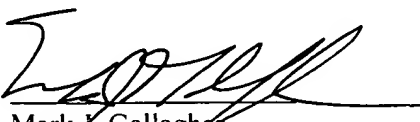
## TRANSMITTAL LETTER

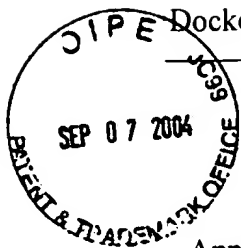
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Enclosed for filing in the above-identified application are:

- (X) An Information Disclosure Statement.
- (X) A PTO Form 1449 with twenty-five (28) references.
- (X) The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Account No. 11-1410.
- (X) Return prepaid postcard.

  
Mark J. Gallagher  
Registration No. 43,622  
Attorney of Record  
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**INFORMATION DISCLOSURE STATEMENT**

Applicant : Gene H. Haertling  
App. No. : 09/891,689  
Filed : June 26, 2001  
For : DEACTIVATED ELECTRO-OPTIC  
MATERIAL AND METHOD OF  
FORMING THE SAME  
Examiner : Evelyn A. Lester  
Group Art Unit : 2873

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Enclosed is form PTO-1449 listing 28 references that are also enclosed.

This Information Disclosure Statement is being filed before the receipt of a first Office Action on the merits after the filing of a Request for Continued Examination and presumably no fee is required in accordance with 37 C.F.R. § 1.97(b)(4). If a first Office Action on the merits was mailed before the mailing date of this Statement, the Commissioner is authorized to charge the fee set forth in 37 C.F.R. § 1.17(p) to Deposit Account No. 11-1410.

Respectfully submitted,

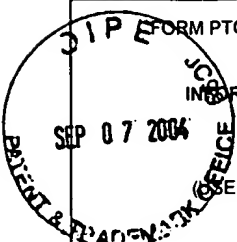
KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: \_\_\_\_\_

9/1/04

By: \_\_\_\_\_

Mark J. Gallagher  
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	FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. TOPTICS.018A	APPLICATION NO. 09/891,689
	INFORMATION DISCLOSURE STATEMENT BY APPLICANT			
	APPLICANT Gene H. Haertling		FILING DATE June 26, 2001	

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
	1.	4,201,442	05/1980	McMahon et al.			
	2.	4,796,982	01/1989	Kitabatake et al.			
	3.	4,993,811	02/1991	Blazey et al.			
	4.	5,011,271	04/30/91	Saito et al.			
	5.	5,016,959	05/1991	Diemeer			
	6.	5,745,280	4/1998	Kitano			
	7.	5,369,718	11/1994	Kamata et al.			
	8.	5,911,018	6/1999	Bischel et al.			

FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	9.	0 344 857 A1	05/1989	Europe				

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)	
	10.	<i>Antiferroelectric-Phase PLZT For Use In High Density Optical Data Storage</i> , S. Mancha, J. Bullington, R. Carter and C. Dehainaut, Airforce Weapons Laboratory (AFSC) Kirtland Airforce Base New Mexico, <i>Ferroelectrics</i> , 1988 Gordon and Breach Science Publishers S.A., Vol. 82, pp. 99-104.
	11.	<i>Crystallization of Lanthanum-Modified Lead Zirconate Titanate (PLZT) Using Coprecipitated Gels</i> , Yao-Jung Lee, Fu-Su Yen, Jong-Ping Wu and Hsing-I Hsiang, <i>Jpn. J. Appl. Phys.</i> , Vol. 34, Pt. 1, No. 8A, August 1995, pp. 4137-4142.
	12.	<i>Crystallization of Silicon on Electro-Optic PLZT by a Laser Beam Modulated in Shape and Intensity Profile</i> , T.H. Lin, M.L. Burgener, S.C. Esener and S.H. Lee, <i>Mat. Res. Soc. Symp. Proc.</i> , Vol. 74, 1987, pp. 135-140.
	13.	<i>Dielectric Properties of (111) and (100) Lead-Zirconate-Titanate Films Prepared by Sol-Gel Technique</i> , K. Aoki et al., <i>Jpn. J. Appl. Phys.</i> , Vol. 33 (1994) Pt. 1, No. 9B, pp. 5155-5158.
	14.	<i>Effects of O<sub>3</sub> on Growth and Electrical Properties of Pb(Zr, Ti)O<sub>3</sub> Thin Films by Photoenhanced Metalorganic Chemical Vapor Deposition</i> , Masaru Shimizu et al., <i>Jpn. J. Appl. Phys.</i> , Vol. 33 (1994) Pt. 1, No. 9B, pp. 5135-5138.
	15.	<i>Electric and Optical Properties of PLZT Ceramic Shutter Array</i> , Y. Takubo et al., <i>Jpn. J. Appl. Phys.</i> , Vol. 24 (1985) Supplement 24-3, pp. 159-161.
	16.	<i>Fabrication of Transparent PLZT Ceramics by Atmosphere Sintering</i> , Katsuhiko Tanaka et al., <i>Japanese Journal of Applied Physics</i> , Vol. 24 (1985) Supplement 26-3, pp. 107-109.
	17.	<i>Fabrication of Transparent PLZT Ceramics with a High Transmittance and Their Application to Optical Light Shutter</i> , Kunihiro Hayashi, et al., <i>Proceedings of the 6<sup>th</sup> Meeting on Ferroelectric Materials and Their Applications</i> , Kyoto 1987, <i>Japanese Journal of Applied Physics</i> , Vol. 26 (1987) Supplement 26-2, pp. 126-128.
	18.	<i>High Speed Optical TIR Switches Using PLZT Thin-Film Waveguides on Sapphire</i> , Hidetaka Higashino, Takao Kawaguchi, Hideaki Adachi, Toshihiko Makino and Osamu Yamazaki, <i>Proceedings of the Sixth International meeting on Ferroelectricity</i> , Kobe, 1985, <i>Jpn. J. Appl. Phys.</i> Vol 24 (1985) Suppl. 24-2, p. 284-286.

EXAMINER	DATE CONSIDERED
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
TOPTICS.018AAPPLICATION NO.  
09/891,689INFORMATION DISCLOSURE STATEMENT  
BY APPLICANTAPPLICANT  
Gene H. HaertlingFILING DATE  
June 26, 2001GROUP  
2873

USE SEVERAL SHEETS IF NECESSARY)

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)	
	19.	Optical Switch Utilizing Total Reflection of (Pb, La) (Zr, Ti)O <sub>3</sub> Ceramics, Toshio Utsunomiya, Jpn J. Appl. Phys. Vol. 33 (1994) pp. 5440-5442 Part 1, No. 9B, September 1994.
	20.	Optical TIR Switches Using PLZT Thin-Film Waveguides on Sapphire, Kiyotaka Wasa et al., <u>Journal of Lightwave Technology</u> , Vol. LT-2, No. 5, pp. 710-713, October 1984.
	21.	A (Pb, La)(Zr, Ti)O <sub>3</sub> (PLZT) Polarization-Plane with a Buried Electrode Structure for a Mid-Infrared Electro-Optical Shutter, Yoshiharu Taniguchi, Kensuke Murakami, Hiroshi Kobayashi and Shosaku Tanaka, Jpn. J. Appl. Phys., Vol. 36 (1997) Pt. 1, No. 5A, pp. 2709-2714.
	22.	PLZT Electrooptic Shutter, K. Tanaka et al., Jpn. J. Appl. Phys., Vol. 22 (1983) Supplement 22-2, pp. 126-128.
	23.	The Polarization-Reversal Characteristics of Pb(Zr, Ti)O <sub>3</sub> Family Ceramics, Y. Masuda et al., Proceedings of the 4 <sup>th</sup> Meeting on Ferroelectric Materials and Their Applications, Kyoto 1983, Jpn. J. Appl. Phys., Vol. 22 (1983) Supplement 22-2, pp. 118-122.
	24.	Preparation and Characterization of Sol-Gel Derived Epitaxial and Oriented Pb(Zr <sub>0.52</sub> Ti <sub>0.48</sub> )O <sub>3</sub> Thin Films, Keiichi Nashimoto and Shigetoshi Nakamura, Jpn. J. Appl. Phys., Vol. 33 (1994) Pt. 1, No. 9B, pp. 5147-5150.
	25.	Preparation of Pb(Zr,Ti)O <sub>3</sub> Thin Films by Sol-Gel Technique, Tomoyasu Takusagawa, Noriaki Yamada, Terumasa Kato, Hajime Hattori and Teruyuki Matsui, Jpn. J. Appl. Phys. Vol. 33, Pt. 1, No. 9B, 1994, pp. 5151-5154.
	26.	Prism-Type Optical Deflector Using PLZT Ceramics, Toshio Utsunomiya et al., <u>Japanese Journal of Applied Physics</u> , Vol. 24, (1985) Supplement 24-3, pp. 169-171.
	27.	Uniform Ultra-Thin Pb(Zr, Ti)O <sub>3</sub> Films Formed by Metal-Organic Chemical Vapor Deposition and Their Electrical Characteristics, Hiroshi Miki and Yuzuru Ohji, Jpn. J. Appl. Phys., Vol. 33 (1994) Pt. 1, No. 9B, pp. 5143-5146.
	28.	(Co-pending) U.S. Patent Application No. 10/013,336 (Attorney Docket No. TOPTICS.004CP2)

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EXAMINER	DATE CONSIDERED
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	